UVC-XP4DN-HR(-P) Camera User Manual

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Product description

This color video camera is the next generation in wide dynamic range cameras. It uses the latest in UTC Xposure image analysis technology.

The sensor architecture provides unequaled wide dynamic range performance and improves how the camera deals with low-light conditions.

Another revolutionary feature of the UltraView XP4 is dual-temperature calibration. The UVC-XP4-HR is calibrated at the factory, so the camera knows how to adjust gain, white balance, and other settings based on its environment. The camera is able to get the best possible images in any situation and at any temperatures within its operating specifications.

User guidelines

Use the following guidelines:

- Program as many camera settings as possible before mounting the camera. Take appropriate safety precautions while completing programming after installation.
- Always use a 12 VDC or 24 VAC UL listed Class 2 power supply to power the camera.

  Do not use the camera outside the temperature range specifications: -10 to +50 °C (14 to 122 °F).
- If the light source where the camera is installed experiences rapid, wide- variations in lighting, the camera may not operate as intended.

WARNING: To reduce the risk of fire or electronic shock, do not expose the camera to rain or moisture and do not remove the cover or back.

Package contents

Check the package and contents for visible damage. If any components are damaged or missing, do not attempt to use the unit; contact the supplier immediately. If the unit is returned, it must be shipped back in its original packaging.

Package contents:

- Quick Start Guide
- Camera
- C-mount adaptor

Installation

This chapter provides information on how to install the camera.

Video connections

To make cable connections, do the following:

1. Connect a coaxial cable terminated with BNC connectors between the MON OUT connector of the

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camera and the video in connector on a test or local monitor.

2. Connect a coaxial cable terminated with BNC connectors between the VIDEO OUT connector of the camera and the video in connector on a monitor, multiplexer, switcher, or other standard video device.

Attach the lens

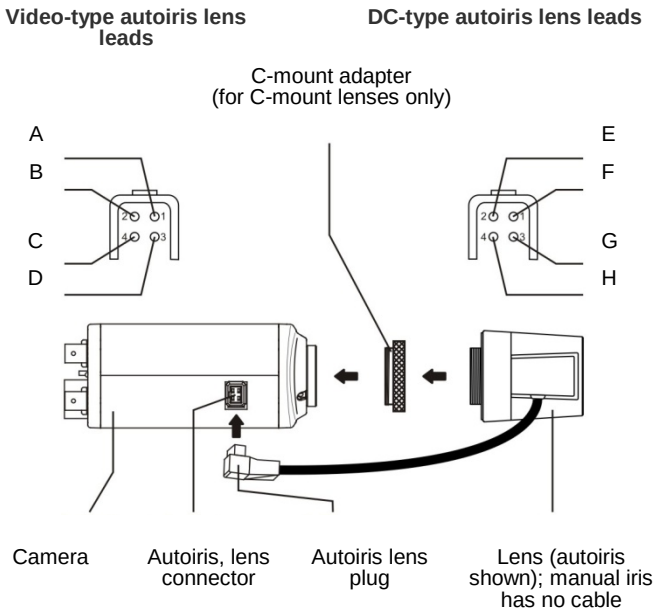
Refer to the instructions that came with the lens you purchased for complete installation instructions of that lens. The camera automatically detects the type of lens used.

Note: For optimal performance, use an autoiris lens.

To install most lenses, see Figure 1 below and do the following:

1. If you are using a C-mount lens, screw on the provided C-mount adapter.
2. Screw your customer-supplied lens onto the camera.
3. If you are using an autoiris lens, insert the autoiris lens plug into the autoiris lens connector.

Figure 1: Attaching your lens



Video-type autoiris lens leads: **A.** Red (9 VAC); **B.** NC (no connection); **C.** Black (ground); **D.** White (video)

DC-type autoiris lens leads: **E.** Damping coil (+); **F.** Damping coil (-); **G.** Driving coil (+); **H.** Driving coil (-)

Connect power

Caution: Use direct plug-in UL listed power supplies marked Class 2 or LPS (limited power source) of the required output rating as listed on the unit.

1. With a screwdriver, loosen the GND and ~AC24V/DC12V terminal screws on the terminal block.
2. Connect a universal 12 VDC, 24 VAC power supply to the terminal block.

   Note: The terminal block is not polarity- sensitive. Either power lead can be connected to either terminal connector. There is no need for an isolated ground wire. The two power terminals can accept any polarity and any combination of power that equals 12 VDC or 24 VDC.
3. Retighten the terminal screws until snug, ensuring that the power leads are secure.
4. Supply power to the unit by plugging the power supply into a proper source.

   Note: The power LED illuminates to show that the camera is receiving power. If it does not illuminate, check the terminal block connections and the power source

Mount the camera

To mount the camera, attach the camera to the mounting surface using the appropriate fasteners.

Connect the monitor

Program the cameras by attaching a standard video monitor to the system.

To connect the monitor, do the following:

1. Plug the monitor output cable to the video monitor output connector.
2. Connect the BNC cable to the video monitor.
3. Press Enter (see Figure 2) to display the Setup menu.

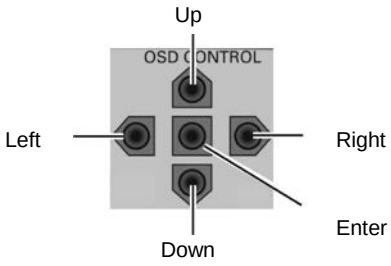
Programming

This chapter describes how to navigate the setup menus to adjust the camera settings.

OSD controls

Use the OSD (on-screen display) setup menus to program the camera. See Figure 2 on page 3. The OSD menus are only available in English.

Figure 2: OSD menu controls



There is a menu map on the back page of the manual that shows an overview of the menu structure (see “Menu map” on page 6.)

Main menu

The camera is configured through the setup menus that appear on-screen (see Figure 3).

To access and navigate the main menu, press and hold the Enter button (See Figure 2). Use the up or down buttons to move between items, and press the Enter button to select that item. Use the left and right buttons to select the different options available for the item.

Figure 3: Main menu

Table 1 lists the main menu options.

Table 1: Main menu options

Menu option	Function
Presets	Configures the preset for the lighting condition.
Setup	Configures camera ID, motion detection, and wide dynamic range options.
Viewing	Configures flip and resolution.
Exposure	Configures automatic gain control (AGC), AE preferences, shutter limit, frame report, and B/W control.
White balance	Configures automatic white balance (AWB) mode, and auto tracking white balance (ATW).
Save/restore	Saves user settings, restores user settings, and restores factory settings.
Exit	Exits the OSD menu system and returns to live mode.

When in a submenu, you can easily move back to a previous menu, save changes as well as cancel changes and return to live mode. Select one of these options:

Prev.	Returns to the previous menu.
Save	Saves changes.
Cancel	Cancels and returns to live mode.

Presets menu

Table 2 lists the presets for common lighting conditions. Select the option that suits your camera’s situation.

Table 2: Preset menu options

Menu option	Description
Normal	This is the camera default preset for general lighting conditions out of the box. This mode supports 14 bits of dynamic range and gives priority to rendering the highlights in the scene.
Indoor	This preset supports 16 bits of dynamic range and gives priority to rendering the shadows in the scene. It is primarily used for typical indoor scenes and when you want to see backlit objects clearly in front of bright backgrounds (as in a building lobby, for example).
Outdoor	This preset offers the highest dynamic range of 17 bits and gives priority to rendering the highlights in the scene. This mode produces flatter images than modes with lower dynamic range.
Flickerless	Internally generated sync that reduces flicker under fluorescent lighting.
Custom	Whenever any menu items are changed, Custom will be displayed.

Setup menu

From the Main menu, use the arrow buttons to select Setup and press the Enter button. The Setup menu screen appears.

Figure 4: Setup menu

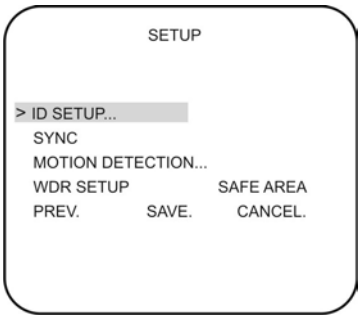


Table 3 below lists the main menu options.

Table 3: Setup menu options

Menu option	Description
ID setup	Configures camera identification and position. See “Camera ID setup” on page 4 for setup information.
Sync	Select one of the two options: **INT** - Internal Synch. This is used with DC Power Input as a way to reduce the phase roll of fluorescent lights. **LL** - Line Lock. This is used to synch video for AC Power Input so that the synch matches the frequency of the power input. This will completely eliminate the roll caused by fluorescent lights.

Menu option	Description
Motion detection	Configures detection threshold, PTZ settings, and the location and size of the detection zone. See “Motion detection” below for setup information.
WDR setup	Configures wide dynamic range (WDR). WDR allows you to see details of objects in shadows or details of objects in bright areas of frames that have high contrast between light and dark areas. Select one of the options: Safe area, ATM, Lower 1/3, or WDR Normal.

Camera ID setup

From the Setup menu, use the arrow buttons to select ID setup and press the Enter button. The Camera ID Setup menu screen appears.

Figure 5: ID setup menu

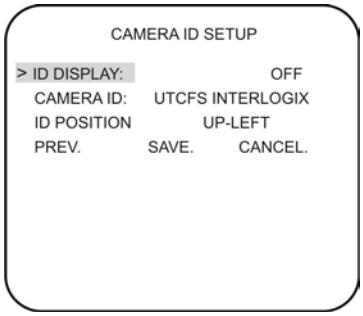


Table 4 below lists the Camera ID setup menu options.

Table 4: Camera ID setup menu options

Menu option	Description
ID display	Select on or off.
Camera ID	Defines the camera name. Press the **right** button to move the cursor to edit the camera ID. Use the **right** or **left** buttons to cycle through the character options and the **Enter** button to select. When complete, use the **up** or **down** buttons to leave the editing field.
ID position	Defines where on-screen the camera name is displayed. Select one of the position options: Up-Left, Up-Center, Up-Right, Down-Left, Down-Right.

Motion detection

A motion detection alarm refers to an alarm triggered when the camera detects a motion.

From the Setup menu, use the arrow buttons to select Motion detection and press the Enter button. The Motion Detection menu screen appears.

Figure 6: Motion detection menu

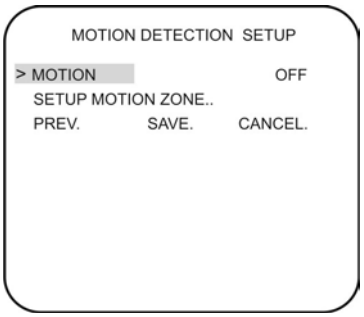
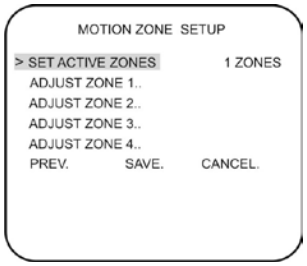
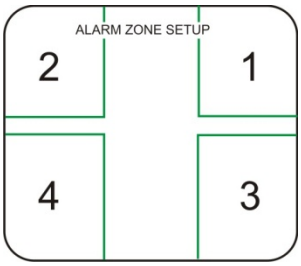


Table 5 below lists the Motion Detection Setup menu options.

Table 5: Motion Detection setup menu options

Menu option	Description
Motion	Enable or disable the motion detection option.
Set motion zone	Defines the on-screen area to trigger a response to motion. Up to four zones can be set. Select *Setup motion zone* to open the menu. This menu lets you select the location and size of the detection zone.  Use *Set active zones* to select the desired number of zones to be set on screen. Select the zone to be modified using *Adjust zone*…. This screen appears with four boxes with the selected zone in a white frame:  Use the arrow buttons to move and size each box. The color of the box determines whether the size or position changes when the arrows are pressed. When completed, press Enter for a couple of moments to return to the previous screen.

Viewing menu

From the Main menu, use the arrow buttons to select Viewing and press the Enter button. The Viewing menu screen appears.

Figure 7: Viewing menu

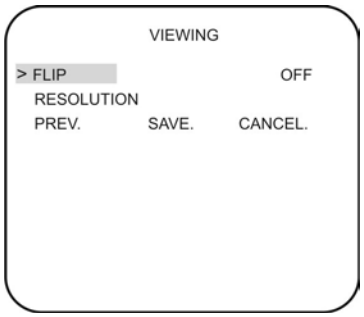


Table 6 below lists the Viewing menu options.

Table 6: Viewing menu options

Menu option	Description
Flip	Flips the camera image so that it is correctly orientated for viewing. Select one of the options: Off, Horizontal, Vertical, or Both.
Resolution	Configures resolution. Select High or Normal option. The High option oversharpens the image for higher resolution.

Exposure menu

From the Main menu, use the arrow buttons to select Exposure and press the Enter button. The Exposure screen appears.

Figure 8: Exposure menu

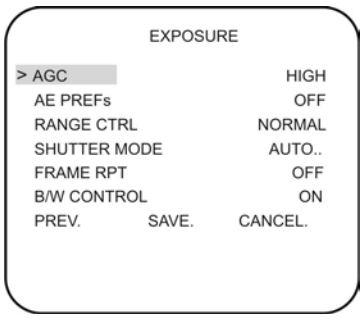


Table 7 lists the Exposure setup options.

Table 7: Exposure menu options

Menu option	Description
AGC	Configures automatic gain control (AGM). The image quality is automatically adjusted in low light conditions. Select one of the options: Medium, High, Custom, or Low.
AE preferences	When enabled, it automatically optimizes the image for highlights or shadows.
Range control	Select one of the options: Low, Normal, Medium, High, Custom. If Custom is selected, adjust the bias and limit options.
Shutter mode	Configures shutter limit. Select one of the options: X2, X4, X8, X16, X32, or Off.
Frame RPT	Configures the frame repeat. Select Off, 2X, or Freeze.
B/W control	Enable or disable day/night mode. Enable the option for automatic day/night control. Disable for color-only mode (day mode).

White balance menu

From the Main menu, use the arrow buttons to select White balance and press the Enter button.

Figure 9: White balance menu

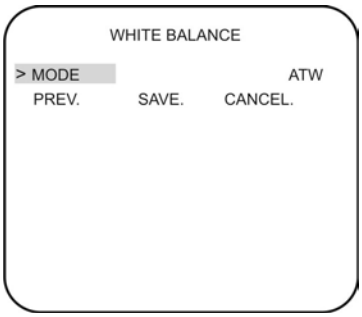
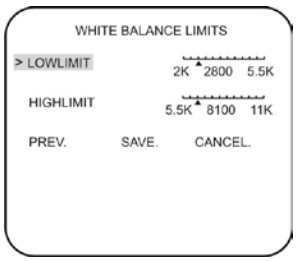


Table 8 below lists the White Balance menu options.

Table 8: White balance menu options

Menu option	Description
Mode	**ATW** (Auto tracking white balance) - The default white balance range of the XP4 camera is between 2800 and 7500 Kelvin depending on the color temperature of the scene illumination. It can be manually adjusted to between 2000 and 11000 Kelvin.  **PTL** – Saves the AWB (Automatic white balance) value and all changes made. Use this option with care.

Save/restore menu

From the Main menu, use the arrow buttons to select Save/restore and press the Enter button.

Figure 10: Save/restore menu

Table 9 below lists the Save/restore menu options.

Table 9: Save/restore menu options

Menu option	Description
Save user settings	Saves all current changes.
Restore user settings	Discards all current changes since the last time “Save user Settings” was used.
Restore factory settings	Resets all settings to factory default.
Reset camera	Performs camera reset.
Prev.	Returns to previous menu.

Regulatory information

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FCC compliance	**Class A:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
ACMA compliance	**Notice!** This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
Canada	This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-0330 du Canada.
Certification	CE C-tick N4131
European Union directives	**12004/108/EC (EMC directive)**: Hereby, UTC Fire & Security declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC.

	2002/96/EC (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

Contact information

For contact information see: www.interlogix.com or www.utcfssecurityproducts.eu.

Menu map